

In other words, *inter alia*, the present disclosure relates to a method involving **the collection of operational data** on a locomotive. After that, **on-board the locomotive**, it is determined whether a remote station is within communication range using one of two methods, and if it is within range, then **on-board the locomotive attempts and establishes** a wireless communication between its on-board computer and the remote station determined to be within range.

On the other hand, Neeson et al., as indicated by its title, is an apparatus and method for tracking, reporting and recording **equipment inventory** on a locomotive. An on-board computer communicates with “intelligent devices” onboard the locomotive and builds a “Health Report” indicating the presence or absence of those “intelligent devices” and their status. This “Health Report” is transmitted to a wayside or base station 52, 54 along the edge of the track, and the “Health Report” subsequently is transmitted to a front end processor 46. As specifically indicated in column 8, lines 41-43 of Neeson et al., “the mobile communications package 12 monitors the on-board ‘intelligent devices’ and reports initial configuration and configuration changes to the front end processor 46.”

Applicants acknowledge that, regarding the method steps of Applicants’ Claim 1 dealing with the collection of data, the determination of which computer files are new since last transmission and the transferring of the new files to the remote station, there is no dispute in that both Neeson et al. and Applicants’ present disclosure teach those steps.

However, Applicants strongly assert that Neeson et al. does not disclose two of the **steps of Applicants’ Claim 1**, that is: “determining onboard if a remote station is within communication range by one of determining onboard location of train and location of next remote station and transmitting a wireless query and monitoring for a response” and “attempting and establishing from onboard wireless communication between the on-board computer and the remote station determined to be within communication range.”

With respect to the portions of Neeson et al. referenced in the office action, it specifically discloses that the invention “will not attempt to send equipment inventory information to a remote location if the locomotive is not in contact with the ground network of the stations.” (Column 5, lines 17-20.) It further states that in “attempting to transmit equipment identification information while the locomotive is out-of-range, the MCP may not be able to receive important emergency information from the dispatcher upon returning to contact with the ground network.” (Column 5, lines 28-32.) This section indicates that it only transmits information when it is in contact. It does not indicate or teach determining if the onboard station is within communication range. It only indicates whether they are in contact or communication.

The area noted by the examiner in column 7, line 63 through column 8, line 3 states:

The front end processor 46 may accurately track the location of any field unit 36 based on which base station 52 and 54 is being used to maintain radio contact with the field unit 36 via SSI (the signal strength indicator in ABNS) which compares the signal strength of the incoming signal to a full strength signal to determine the distance between the field unit 36 and the receiving base station 52 and 54.

Thus, communication range is determined by the front end processor 46 from the incoming signals received by the base stations 52, 54 not by any on board computer or system.

As recognized in the office action, Neeson et al. does not explicitly disclose determining onboard whether a remote station is within range, much less by one of the two claimed methods. The incremental train control system of Heggesstad et. al. is cited to meet this claim limitation. As will be evident from the following analysis of Heggesstad et. al., it does not determine on board whether a remote station is within range and use this information to attempt to and establish from onboard wireless communication.

As specifically described in Heggesstad et al. with respect to Figure 3 beginning at the bottom of col. 5, line 65 and continuing through col. 6, line 35; the data radio 50 on the locomotive is normally in a received mode and decodes incoming profile and authority messages and delivers the data to the speed monitoring and enforcing computer (OBC 48). The transponder interrogator 66 interrogates a trackside transponder 55 to read the location data from the transponder 55 and feed it to the OBC 48. Thus, location of the train is determined by information received by location data transmitted by a wayside transponder 55 location.

Since the locomotive is in a continuous receiving mode with the wayside station, the location is not used to attempt and establish wireless communication since it is already established. The importance of the location is to determine when the data radio 50 transfers from its received mode to its transmit mode. As indicated in col. 7, line 6 through 20 "The OBC 48 has in memory the profile of the local area which it previously received from the wayside control unit 34 upon entry into the area under its control." Thus again, reemphasizing that it has continuous communication. Upon approaching the interlocking 88, the onboard computer 48 commands the radio 50 to go to its transmit mode and request authority from the wayside command unit 34.

Thus, there is no teaching in Heggesstad et al. for determining onboard if a remote station is within communication range by one of the determining onboard location of the train and location of the next remote station and transmitting a wireless query and monitoring for the response. The reason this limitation is not met is because it is already in continuous

communication in the received mode. The location is determined by interrogating a trackside transponder 55 and from information already received by communication with the wayside control unit 34.

Thus, incorporating the teachings of Heggstad et al. into that of Neeson et al. will not produce the present invention. Heggstad et al. does not provide the appropriate determining onboard if the remote station is within communication range and using this information to attempt and establish from onboard wireless communication between the onboard computer and the remote station determined to be within communication range. Combining Heggstad et al. with Neeson et al. teaches away from the present invention.

Likewise, in Neeson et al., there is no explicit disclosure that the wireless communication between the on-board computer and the remote station determined to be within range is attempted and established from onboard the locomotive. The disclosure and description in Neeson et al. is that the ground network or remote stations are in control of communications with the locomotive. As stated in the rejection, Neeson et al. at column 7, lines 34-47 states:

Each base station 52 and 54 is preferably located alongside a railroad track, with the base stations being spaced apart along the length of the track such that as a field unit [i.e., a locomotive] 36 moves along the track, it remains in radio contact range of the nearest base station and is “passed off” to the next base station along the track. Hundreds of base stations are situated along railroad tracks throughout the railroad system, thus enabling field units 36 to remain in contact with a dispatcher 32 or customer service representative 35. In other words, the base stations 52 and 54 provide the interface from the ground network which connects the base stations 52 and 54 with the front end processor 46 and the radio frequency network which connects the base stations 52 and 54 and field units 36.

With respect to “passing off,” it is the ground stations that keep continuous communication with the onboard computer. The mere provision of a half duplex communication does not teach this limitation. The description of the half duplex communication is a supposition made in hindsight to meet the limitation of the claims.

Therefore, based upon all of the above, it is clear that Neeson et al. does not disclose nor is it obvious to combine with Heggstad et. al. to meet the method steps of Applicants’ Claim 1, “determining onboard if a remote station is within communication range by one of determining onboard location of train and location of next remote station and transmitting a wireless query and monitoring for a response” and “attempting and establishing from onboard wireless communication between the on-board computer and the remote station

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determined to be within communication range.” Thus, Claim 1, as amended, is considered allowable over Neeson et al., and such is respectfully requested.

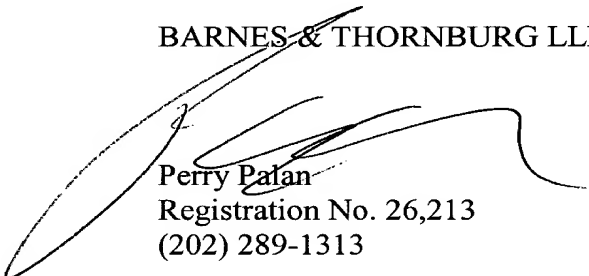
Claims 2-4, 7, 9, 10, 12-21 and 46-49 depend from amended Claim 1 and are allowable for at least the same reasons as amended Claim 1, and such is hereby requested. Since Claim 1 is considered generic, Claims 12-14, as included above, should also be considered and be allowable, and such is hereby requested.

In view of all of the above, the Application is now deemed to be in condition for allowance and such is respectfully requested.

It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time sufficient to effect a timely response and that shortages in fees, if any, be charged, or any overpayment in fees credited, to the Account of Barnes & Thornburg, Deposit Account No. 02-1010 (509/35644).

Respectfully submitted,

BARNES & THORNBURG LLP



Perry Palan
Registration No. 26,213
(202) 289-1313